

EPA Descriptions of 26 Sites Proposed for the National Priorities List in May 1993

Office of Emergency and Remedial Response
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This document consists of descriptions of the 26 sites proposed for the National Priorities List (NPL) in May 1993. The size of the site is generally indicated, based on information available at the time the site was scored using the Hazard Ranking System. The size may change as additional information is gathered on the sources and extent of contamination. Sites are arranged alphabetically by State (two-letter abbreviations) and by site name.

CLEANING UP UNDER SUPERFUND

The Superfund program is managed by the U.S. Environmental Protection Agency (EPA). It is authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), enacted on December 11, 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA), enacted on October 17, 1986. In October 1990, SARA was extended to September 30, 1994. The Hazardous Substance Response Trust Fund set up by CERCLA as amended pays the costs not assumed by responsible parties for cleaning up hazardous waste sites or emergencies that threaten public health, welfare, or the environment; Superfund also pays for overseeing responsible parties conducting cleanup.

Two types of responses may be taken when a hazardous substance is released (or threatens to be released) into the environment:

- **Removal actions** – emergency-type responses to imminent threats. SARA limits these actions to 1 year and/or \$2 million, with a waiver possible if the actions are consistent with remedial

responses. Removal actions can be undertaken by the private parties responsible for the releases or by the Federal government using the Superfund.

- **Remedial responses** – actions intended to provide permanent solutions at uncontrolled hazardous waste sites. Remedial responses are generally longer-term and more expensive than removals. A Superfund-financed remedial response can be taken only if a site is on the NPL. EPA published the first NPL in September 1983. The list must be updated at least annually.

EPA's goals for the Superfund program are to:

- Ensure that polluters pay to clean up the problems they created; and
- Work first on the worst problems at the worst sites, by making sites safe, making sites clean, and bringing new technology to bear on the problem.

REMEDIAL RESPONSES

The money for conducting a remedial response at a hazardous waste site (and a removal action, as well) can come from several sources:

- The individuals or companies responsible for the problems can clean up voluntarily with EPA or State supervision, or they can be forced to clean up by Federal or State legal action.
- A State or local government can choose to assume the responsibility to clean up without Federal dollars.
- Superfund can pay for the cleanup, then seek to recover the costs from the responsible party or parties.

A remedial response, as defined by the National Contingency Plan (the Federal regulation by which Superfund is implemented), is an orderly process that generally involves the following steps:

- Take any measures needed to stabilize conditions, which might involve, for example, fencing the site or removing above-ground drums or bulk tanks.
- Undertake initial planning activities to scope out a strategy for collecting information and analyzing alternative cleanup approaches.
- Conduct a remedial investigation to characterize the type and extent of contamination at the site and to assess the risks posed by that contamination.
- Conduct a feasibility study to analyze various cleanup alternatives. The feasibility study is often conducted concurrently with the remedial investigation as one project. Typically, the two together take from 18 to 24 months to complete and cost approximately \$1.3 million.
- Select the cleanup alternative that:
 - Protects human health and the environment;
 - Complies with Federal and State requirements that are applicable or relevant and appropriate;

- Uses permanent solutions and alternative treatment technologies or resource recovery technology to the maximum extent practicable;

- Considers views of the State and public; and

- Is "cost effective" – that is, affords results proportional to the costs of the remedy.

- Design the remedy. Typically, the design phase takes 6 to 12 months to complete and costs approximately \$1.5 million.

- Implement the remedy, which might involve, for example, constructing facilities to treat ground water or removing contaminants to a safe disposal area away from the site.

EPA expects the implementation (remedial action) phase to average out at about \$25 million (plus any costs to operate and maintain the action) per site, and some remedial actions may take several years to complete.

The State government can participate in a remedial response under Superfund in one of two ways:

- The State can take the lead role under a cooperative agreement, which is much like a grant in that Federal dollars are transferred to the State. The State then develops a workplan, schedule, and budget, contracts for any services it needs, and is responsible for making sure that all the conditions in the cooperative agreement are met. In contrast to a grant, EPA continues to be substantially involved and monitors the State's progress throughout the project.
- EPA can take the lead under a Superfund State Contract, with the State's role outlined. EPA, generally using contractor support, manages work early in the planning process. In the later design and implementation phases, contractors do the work under the supervision of the U.S. Army Corps of Engineers. Under both arrangements, the State must share in the cost of the implementation phase of cleanup.

CERCLA requires that EPA select the remedy.



MONARCH TILE MANUFACTURING, INC.
Florence, Alabama

Monarch Tile Manufacturing, Inc., produces ceramic tiles and glazes, and is located at the intersection of Rickwood Street and Helton Drive in Florence, Lauderdale County, Alabama. The area is primarily industrial with Seaboard Railroad tracks to the west, and a bus company maintenance facility to the south.

Stylon Corp. operated the facility from 1954 until 1973, when the company went bankrupt. Monarch then leased the property from the city of Florence with an option to buy. The company purchased the property in 1988. No previous industrial activity or disposal took place at the site prior to 1954.

In their operations, both Monarch and Stylon used zinc contaminated with lead, barium, and cadmium as colorants. Starting in 1960, these hazardous wastes, along with other liquid wastes, were routed to a separator. The liquids from the separator went to settling ponds, with any excess liquid draining into ditches that run south of the facility. In 1976, Monarch began discharging the liquids from settling ponds to the Florence Sewer System, with the City's permission. Solids from the separator were taken to a municipal landfill until 1980, when Monarch constructed an onsite disposal trench. In March 1989, Monarch resumed sending the solids to a municipal landfill.

The Alabama Department of Environmental Management (ADEM) found barium, nickel, lead, and zinc in composite samples of sediment collected from the settling ponds in August 1989. In October 1990, ADEM also found zinc, cadmium, lead, nickel, chromium, and barium in sediment samples from the northern drainage pathway to Cox Creek, zinc in Cox Creek, and barium and zinc in an unnamed tributary of Sweetwater Creek.

Surface water within 15 miles downstream of the site includes the unnamed tributary, Cox Creek, Sweetwater Creek, Cypress Creek, and the Pickwick Lake segment of the Tennessee River. The site is located approximately 3 miles north of Pickwick Lake and approximately 2 miles east of Cypress Creek.

The Florence Water Department supplies drinking water to an estimated 63,000 people from an intake located where Cox Creek and Cypress Creek meet. The Sheffield Water Department has an intake on the Tennessee River that serves 14,100 people. Cox Creek, Cypress Creek, and the Tennessee River are used for recreational fishing.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



ASARCO, INC. (GLOBE PLANT)
Denver, Colorado

ASARCO, Inc.'s Globe Plant covers approximately 92 acres at 495 East 51st Avenue, Denver, Colorado, near a neighborhood commonly known as Globeville. The site is in an industrial, commercial, and residential area of Denver and Adams Counties, on the western edge of the South Platte River channel and approximately 2.7 miles upstream of where the river meets Clear Creek. With the exception of the southeast section, the majority of the site is on a terrace that rises from 30 to 60 feet above the South Platte River floodplain.

The Globe Plant began operating in 1886, producing gold, silver, copper, and lead. In 1901, American Smelting and Refining Co. (later renamed ASARCO, Inc.) purchased the site and converted it to a lead smelter. In 1921, lead smelting was replaced by arsenic trioxide production, which lasted for about 5 years, when the plant changed to cadmium production. Currently, cadmium, litharge (lead oxide), thallium, and other high-purity metals are produced.

Local and State governments, as well as EPA, have investigated the site over the years. In 1974, the Colorado Department of Health (CDH) analyzed water and sediment in Industrial Ditch, which borders the site to the west. The ditch has historically received runoff from the ASARCO facility and conveyed excess surface water through a series of conduits to the South Platte River. Elevated levels of cadmium, lead, and zinc were detected downstream of the ditch. In 1980 and 1981, CDH found that ASARCO was violating the Colorado Solid Waste Disposal Sites and Facilities Act. In December 1981, the State sued ASARCO for damages to natural resources under CERCLA Section 107. As a result, the State and ASARCO conducted joint remedial investigations, which yielded a comprehensive report characterizing onsite wastes and documenting elevated levels of cadmium, arsenic, and zinc in ground water, surface water, surface water sediments, and soil. Among the waste sources releasing hazardous substances are the former Neutralization Pond and associated Precipitate Pile, the Slag Pile, and contaminated soil both on and off the site.

Wetlands and fisheries within 15 downstream miles of the site are subject to actual and potential contamination from surface water that has migrated off the site.

Contaminated soil extends from the plant for several hundred feet in all directions, and underlie homes of 300 residents of nearby Globeville.

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SUMMITVILLE MINE
Rio Grande County, Colorado

Summitville Mine is located in the San Juan Mountains near Del Norte in Rio Grande County, Colorado. The 1,400-acre site is extremely remote at an elevation of more than 11,000 feet, making the site accessible by vehicle only in the summer months.

Mining began at Summitville in the late 1800s. The most recent operator, Summitville Consolidated Mining Corp., Inc. (SCMCI), began open pit mining and recovering gold by cyanide heap leaching in 1986.

SCMCI originally designed the mining operation as a non-discharging waste water facility. Problems with discharges eventually required SCMCI to obtain a NPDES permit from the State to operate a waste water treatment plant.

Several releases of water contaminated with cyanide and metals have been documented at the mine. The State has issued Notices of Violation to SCMCI for unpermitted releases of contaminated water. Fish kills have been reported from Wightman Fork downstream to Terrace Reservoir, approximately 20 miles downstream from the mine site.

Because SCMCI has declared bankruptcy, EPA is maintaining the site using CERCLA emergency funds to ensure that 150 million gallons of water contaminated with cyanide and metals are not released into Wightman Fork. Wightman Fork flows into the Alamosa River 5 miles downstream.

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PLYMOUTH AVENUE COUNTY LANDFILL DeLand, Florida

The 131-acre Plymouth Avenue Landfill is located in a thinly populated residential and commercial area approximately 1.75 miles west of the corporate limits of DeLand in Volusia County, Florida. From the early 1940s until 1971, the site was used as an open dump. Since 1971, it has been a sanitary landfill under the ownership of the Volusia County Department of Public Works. From 1984 through August 1988, the site received all types of nonhazardous industrial and municipal solid wastes. The landfill now accepts only household waste, yard trimmings, and construction debris.

Exact disposal practices at the facility from 1941 to approximately 1978 are unknown. From June 1978 to October 1980, the landfill reportedly received 4,500 gallons per week of process waste slurry from Brunswick Corp. in De Land. Brunswick generated the waste from a nitric acid process for polishing steel. The waste was spread over the land or deposited into shallow trenches in the southeastern section of the landfill. During 1980, Brunswick shifted to a sulfuric acid process. From September 1980 through August 1988, three consecutive disposal pits were constructed at the landfill to receive the slurried sulfuric acid process waste (also known as iron sulfate/calcium sulfate waste). The pits received approximately 900 pounds per day of Brunswick waste. Both the nitric acid and sulfuric acid waste streams included nickel, chromium, and copper. No further waste from Brunswick was received by the landfill after 1988.

The Plymouth Avenue Landfill has considerable topographic variation, with several karst characteristics, including sinkholes. Two major water-bearing units underlie the area: the surficial aquifer and the deeper Floridan aquifer. The aquifers are hydraulically connected so that water can move between them. The Floridan is the principal source of drinking water in the county; the surficial aquifer supplies some domestic wells, which range in depth from 15 to 50 feet. Wells within 4 miles of the landfill supply water to an estimated 25,106 people. Ground water is also used to irrigate nearby citrus groves.

In 1990, EPA detected elevated levels of contaminants such as bis (2-ethyhexyl) phthalate, barium, cobalt, manganese, and nickel in monitoring wells in the surficial aquifer. Additionally, samples collected by Volusia County from three private wells near the landfill repeatedly exceeded EPA's Primary Drinking Water Standards for nitrates. These residents are still using the private wells.

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DEL MONTE CORP. (OAHU PLANTATION)
Honolulu County, Hawaii

Del Monte Corp.'s Oahu Plantation occupies 6,000 acres in Honolulu County, Hawaii, near the small village of Kunia on the coastal plain of the Island of Oahu. The area surrounding the plantation is used mostly for agricultural and military purposes. Del Monte has cultivated pineapple on the plantation since the 1940s. In pineapple agriculture, fumigants are used to control nematodes that infest the pineapple root. The dominant fumigant used at the plantation from the 1940s until 1983 was ethylene dibromide (EDB).

During the spring of 1980, the Hawaii Department of Health (HDOH) began a program designed to determine whether the fumigants used in pineapple agriculture had contaminated drinking water wells on Oahu. As part of this program, the Del Monte Kunia well was sampled. The well is located on the Oahu Plantation and provided drinking water for the approximately 700 residents of Kunia. Analyses detected two fumigants, EDB and 1,2-dibromo-3-chloropropane (DBCP). On April 25, 1980, HDOH ordered the Del Monte Kunia well removed from service. Water from the contaminated well is sprinkled onto noncrop fields.

Following the discovery of contamination, investigations by Del Monte, HDOH, and the Hawaii Department of Agriculture revealed two sources of contamination: an area used to store drums of fumigant from the 1940s until 1975, and an area near the well where 495 gallons of EDB spilled in 1977. Soils and ground water beneath these sources contained high concentrations of EDB and DBCP, according to over 400 analyses conducted between 1981 and 1991.

Since the discovery of contamination at the Kunia well, Del Monte engaged in remedial activities at the site, including the removal of 18,000 tons of soil, which was spread on a nearby field.

Despite these actions, the Kunia well contains concentrations of EDB and DBCP that are greater than the Cancer Risk Screening levels for these two contaminants.

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BLACKBIRD MINE Lemhi, Idaho

Blackbird Mine is in Lemhi, 21 miles east of Salmon in east-central Idaho. The mine covers approximately 830 acres of private patented mining claims and 10,000 acres of unpatented claims, all within Salmon National Forest.

Blackbird Mine is in the Panther Creek drainage, part of the Salmon River system, and is surrounded by steep rocky slopes. The mine lies on a surface water divide of two tributaries that drain from Panther Creek: Big Deer Creek and Blackbird Creek, which includes several small tributary streams and springs.

Since the late 1800s, various companies have mined cobalt and copper by both shaft and open pit methods. The current owner, the Noranda Mining Co., has not operated the mine since 1982. Mining tunnels and waste rock piles are scattered along approximately 8 miles of Meadow and Blackbird Creeks. The piles and the open pit mine are located at the headwaters of Bucktail Creek, a tributary of Big Deer Creek. The piles range in size from several hundred to 2 million cubic yards.

Acid drainage from the tunnels and leaching from waste piles contribute to the poor quality of streams in the area. Many investigations have documented the poor water quality and negative impacts on aquatic life of creeks downstream of the mine. The most recent sampling, conducted in January 1992 by the Idaho Department of Environmental Quality, documented high levels of arsenic, copper, cobalt, and nickel in downstream surface water and sediments. Copper levels exceeded EPA's Fresh Water Ambient Water Quality Criteria.

The Snake River Sockeye Salmon, designated by the U.S. Fish and Wildlife Service as an endangered species, and the Snake River spring/summer Chinook Salmon, designated as a threatened species are potentially affected by poor water quality.

In December 1983, the Idaho Attorney General filed a natural resource damage suit under CERCLA Section 107 against Noranda and two previous owners/operators of Blackbird Mine, Howmet Turbine Component Corp. and Hanna Mining Co. The suit alleges damage to State surface waters and ground waters. The suit has not yet been settled.

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TRIUMPH MINE TAILINGS PILES Triumph, Idaho

The Triumph Mine Tailings Piles site consists of two large piles of tailings along the south side of the East Fork Road in a relatively rural area of Blaine County, Idaho. The mine itself, now inactive, is located north of the East Fork Road. The two piles combined occupy approximately 60 acres. The East Fork of the Wood River flows near the southern edge of the tailings piles.

From 1882 until 1957, the Triumph Mine processed ore rich in silver, zinc, and lead. Processing included crushing, grinding, and flotation operations. The slurry remaining from the flotation process was pumped to the upper pile from 1882 to 1930, and to the lower pile from 1930 to 1957.

EPA investigations conducted in 1991 and 1992, have revealed elevated levels of heavy metals in the tailings piles and former mine areas. These metals, such as lead and arsenic, have migrated into residential soil, ambient air, and nearby wetlands. Lead has also been detected above Federal drinking water standards in one of the two community wells on two occasions during spring months.

In cooperation with State and local health agencies, local residents participated in screening for lead in the bloodstream and arsenic in urine on three occasions. Although the results did document some community exposures, the results were generally not above national averages.

As a result of the investigations, EPA, with assistance from the Agency for Toxic Substances and Disease Registry (ATSDR), an arm of the public health service, is evaluating early action for the site. EPA is working with the community to evaluate options for immediate action that would effectively reduce the potential for human exposure to the metals in the environment. Community interviews were conducted in the spring of 1992 and a community workgroup was recently formed to encourage public participation in the decision-making process..

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PADUCAH GASEOUS DIFFUSION PLANT (USDOE) **Paducah, Kentucky**

The Paducah Gaseous Diffusion Plant (PGDP) is a uranium enrichment facility covering approximately 1,350 acres in western McCracken County approximately 10 miles west of Paducah, Kentucky, and about 3 miles south of the Ohio River. PGDP began operating in 1952 and is owned and operated by the U.S. Department of Energy (USDOE). The facility is currently managed by Martin Marietta Energy Systems, Inc.

Approximately 740 acres of the plant are located within a fenced security area. An uninhabited buffer zone surrounds the fenced area. Beyond the USDOE-owned buffer zone is an extensive wildlife management area of 2,100 acres deeded or leased to the Commonwealth of Kentucky.

PGDP performs the first step in the uranium enrichment process, enriching uranium-235 (U-235) in a physical separation process. The separation process is based on the faster rate at which U-235 diffuses through a barrier, in comparison with the heavier uranium-238 (U-238). Subsequent to processing at PGDP, the uranium is further enriched at another USDOE gaseous diffusion plant. Extensive support facilities are required to maintain the diffusion process, including a steam plant, four major electrical switchyards, four sets of cooling towers, a building for chemical cleaning and decontamination, a water treatment plant, maintenance facilities, and laboratory facilities.

Plant operations have generated hazardous, nonhazardous, and radioactive wastes, including PCBs, trichloroethene (TCE), uranium (multiple isotopes), and technetium-99 (Tc-99). In August 1988, USDOE found Tc-99 in an offsite drinking water well north of PGDP. TCE has also been detected in nearby private wells and onsite monitoring wells. Approximately 1,400 people obtain drinking water from public and private wells within 4 miles of PGDP.

USDOE has detected PCBs in onsite surface water and downstream of the plant in Big Bayou Creek and in Little Bayou Creek. These creeks are part of the West Kentucky Wildlife Management Area located adjacent to the facility. Big Bayou Creek is currently used for fishing. In 1989, the State of Kentucky's Division of Water warned against consumption of fish caught from Little Bayou Creek.

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BELTSVILLE AGRICULTURAL RESEARCH CENTER (USDA)
Beltsville, Maryland

The Beltsville Agricultural Research Center (BARC) covers 7,000 acres in suburban Washington, D.C. Beltsville is located in the northern portion of Prince Georges County, Maryland. Owned and operated by the U.S. Department of Agriculture (USDA), the facility has conducted research on animal husbandry, dairying, and animal diseases since 1910. Large agricultural plots and 800 buildings, including research laboratories, administrative offices, shops, greenhouses, barns, and a few houses are located on the site.

Of the 16 sources of hazardous wastes BARC has identified to date, only the Biodegradable Materials Disposal Site was evaluated in detail initially. From at least 1946 to the mid-to-late 1970s, the 4-acre area was used for disposal of metal drums, plastic containers, casings for transformers, and laboratory wastes. USDA analyses in 1990 and 1992 of soil, ground water, surface water, and surface water sediments detected elevated levels of polyaromatic hydrocarbons; several pesticides; PCBs; 1,1,1-trichloroethane; trichloroethene; xylenes; arsenic; barium; beryllium; copper; lead; manganese; mercury; nickel; and zinc.

A trailer park, high school, several housing developments, and many other Federal installations are located within 4 miles of the site. Paint Branch, Little Paint Branch, Indian Creek, and Beaver Dam Creek collect drainage from BARC, which flows to the Anacostia River and eventually to the Potomac River. Hazardous substances threaten the wetlands adjacent to Beaver Dam Creek. Fisheries in the Northeast Branch and the Anacostia River provide a habitat for the Bald Eagle, a species designated as endangered by the U.S. Fish and Wildlife Service, and for the Swamp Pink, a flower designated as a threatened species.

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ORDNANCE PRODUCTS, INC.
Cecil County, Maryland

The Ordinance Products, Inc. (OPI), site is located 2 miles northeast of the Town of North East in Cecil County, Maryland. The 94.6-acre property, currently occupied by an industrial park and warehousing facility known as Mechanics Valley Trade Center (MVTC), is located in a rural area. OPI purchased the property in 1960 and began operating an ordnance manufacturing facility. During the Vietnam conflict, OPI manufactured grenade fuses, detonation devices, smoke grenades, and other types of ordnance. Some off-specification ordnance was burned in open pits and ordnance was buried onsite. The waste water resulting from manufacturing operations was disposed of into five unlined surface impoundments. Kraus Design, Inc. (KDI) became a holding company for OPI in 1969. OPI ceased manufacturing ordnance in 1972 and closed the facility. In 1986, the site was purchased by MVTC, which planned to develop the site as an industrial park. Since that time MVTC, and the site were sold but retained the MVTC corporate entity. MVTC is currently renting buildings in a secure portion of the site to several tenants.

In 1987, the Maryland Department of the Environment (MDE) discovered the site while investigating a nearby property. An extensive MDE sampling program detected elevated levels of metals such as arsenic, selenium, and barium in onsite soils, ground water, and surface water. MDE also detected elevated concentrations of trichloroethene; 1,2-dichloroethene; tetrachloroethene; vinyl chloride; and xylene in two onsite wells and four offsite residential drinking water wells. One onsite well is currently connected to an air stripping tower and is still used as a water source.

On June 27, 1988, EPA issued a Unilateral Administrative Order under CERCLA Section 106(a) requiring KDI to investigate the extent of soil contamination and the amount of buried ordnance onsite. The order requires KDI to (1) remove all contaminated soils and buried ordnance from the site, (2) determine the extent the contaminated ground water plume has migrated both on- and offsite, and (3) install a water treatment system on all residential wells where concentrations of volatile organic compounds (VOCs) have exceeded EPA's Maximum Contaminant Levels (MCLs). In response, KDI has (1) installed 10 offsite ground water monitoring wells to facilitate the offsite hydrogeological study, (2) installed activated carbon filtration units on four residential drinking water wells, and is maintaining the units and sampling the wells every 6 weeks, and (3) removed some contaminated soils and ordnance that had been buried onsite.

KDI's investigation identified the following hazardous waste sources, some of which KDI has already removed under the order: drums scattered over the site, five surface impoundments reportedly used for disposal of plating wastes and other wastes, three subsurface disposal areas containing discarded ordnance, three burn areas also containing ordnance, and other areas of contaminated soil. KDI is continuing to evaluate these sources and also plans to sample water and sediments of Little Northeast Creek, which is adjacent to the site.

On December 31, 1988, EPA issued a Unilateral Administrative Order to MVTC requiring MVTC to maintain site security and to operate and maintain the onsite air stripper.

KDI is continuing to remove all contaminated materials from the site and the offsite hydrogeological investigation.

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HANSCOM AIR FORCE BASE Bedford, Massachusetts

Hanscom Air Force Base occupies approximately 1,120 acres in the towns of Bedford, Concord, Lexington, and Lincoln in Middlesex County, Massachusetts. The facility is located in a light industrial area of eastern Massachusetts. A public airfield was constructed at this location in 1941 and military operations began in 1942. In 1952, the Commonwealth ceded 396 acres of land and leased 641 acres to the Air Force; 83 acres were retained by the Commonwealth. After military flying activities ceased in 1973, the Commonwealth regained control of the leased portion of the base. The airfield and the surrounding land were given to the Massachusetts Port Authority (Massport), which operates a civilian airport as L.G. Hanscom Field. The Air Force still occupies the 396 acres ceded to it in 1952 and operates the Electronic Systems Division of the Air Force Systems Command as Hanscom Air Force Base. The entire original 1,120-acre area is considered a Federal facility.

During the 32 years that the Air Force occupied the airfield, numerous hazardous substances were used, generated, and disposed of on what is now Massport property and on the Airbase. These substances included chlorinated solvents, gasoline and jet fuel, aromatic solvents, tetraethyllead, and PCBs. A total of 14 possible source areas have been identified to date. Among them are: two former fire training areas, a paint waste disposal area, a jet fuel residue/tank sludge area, two landfills, a former industrial waste water treatment system, a former filter bed area, an elemental mercury spill, and a PCB transformer storage area.

Bedford draws its drinking water from ground water beneath the base. Three of the Town's wells were closed in 1984, when they were found to be contaminated with volatile organic compounds (VOCs). In addition, two wells for the Veterans Administration Hospital in Bedford were closed in 1980, when VOCs were detected in the well water. In 1991, the Town of Bedford conducted a remedial investigation at the base. Ground water and surface water samples contained VOCs and it was concluded that the base was a likely source of the contamination in the Town water supply.

Numerous remedial activities have taken place on both the Air Force and Massport properties to address areas of contamination. Drums have been removed at both the Paint Waste Disposal Area and the Jet Fuel Residue/Tank Sludge Area. Contaminated soils have been removed and placed in a secured landfill. A ground water remediation system has been constructed to remove VOC contamination from the ground water beneath the base.

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NATICK LABORATORY ARMY RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER

Natick, Massachusetts

The U.S. Army Research, Development and Engineering Center, commonly known as the Natick Laboratory, is located on Kansas Street in Natick, Middlesex County, Massachusetts. The Natick Laboratory occupies a peninsula on the eastern shore of Lake Cochituate and is bordered to the north by a residential zone. The Natick Laboratory facility is located on 74 acres that was purchased by the Army in 1949 from the Metropolitan District Commission. The property was primarily used as a forested recreational area but also included a gravel pit in the section known as the Building T-25 Area. The Army completed the construction of the Natick Laboratory in 1954; since then, several industrial, laboratory, and storage activities have taken place on the grounds for research and development in food science, aero-mechanical, clothing, material, and equipment engineering.

In its operations, the Army used various substances including tetrachloroethene, trichloroethene, carbon disulfide, benzene, chloroform, tetraethyllead, acetone and other volatile organic compounds (VOCs), "standard laboratory chemicals," mineral spirits/turpentine, paints, inks, lubricants, gasoline, several pesticides, and metal dusts.

Two sources of hazardous substances have been identified onsite. The Building T-25 Area was identified as potentially contaminated around 1989, when personnel at the facility noticed a sheen on the runoff water generated during rain storms. In 1989, construction work was halted in the Gymnasium Area when construction workers noticed a benzene-like odor in soil from a boring that was drilled for construction of a gymnasium.

In 1989, the Army conducted soil gas surveys in the Building T-25 and Gymnasium Areas and detected several VOCs. Soil, ground water, and surface water samples contained elevated concentrations of 1,2-dichloroethene, benzene, carbon disulfide, bis (2-ethylhexyl) phthalate, chlorobenzene, ethylbenzene, xylenes, Freon 113, naphthalene, 1,2,4-trichlorobenzene, arsenic, barium, copper, chromium, lead, zinc, calcium, and sodium.

Other potential sources of chlorinated organic compounds have been identified near Natick Laboratory. Petroleum, organic compounds, and chlorinated solvents have been released into soil and ground water at a property previously occupied by a laundromat, approximately 3,600 feet southeast of the laboratory well field across Lake Cochituate. An "old laundromat" is also reported to exist approximately 2,670 feet east-southeast of the Springvale well field. Certain establishments located on Routes 9, 27, and 30, and some automotive garages in the area may also be sources of VOC contamination in the ground water near the Evergreen and Springvale municipal well fields.

Approximately 37,000 people obtain drinking water from wells within 4 miles of the facility.

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**POTTER CO.
Wesson, Mississippi**

Potter Co. manufactures electrical components, including electromagnetic interference filters and capacitors, at a plant in Wesson, Copiah County, Mississippi, approximately 43 miles southwest of Jackson. Operations began on the 12-acre property in 1953. Land within 1 mile is primarily used for residential and agricultural purposes.

In 1986, Varian Associates, Inc. purchased Pulse Engineering, Inc., of which Potter was a subsidiary. At that time, employees expressed concern over how wastes had been handled at the plant. Subsequent sampling by Potter in April and May 1986 detected PCBs and solvents in onsite surface soils. PCB oils used in the capacitors were cleaned from process equipment with solvents, primarily trichloroethene (TCE). The oil-solvent mixtures were dumped onto the ground outside the manufacturing buildings. In November 1986, additional sampling by Potter detected PCBs in soils in drainage ditches and on adjacent residential property.

In May 1986, the State of Mississippi issued an order requiring Potter to determine the extent of PCB contamination in soils, develop a plan to remove the contaminated soils, and install a monitoring well. Potter detected PCBs, TCE, and several other organic compounds in the new monitoring well, and also in several other monitoring wells.

Analyses conducted by the Mississippi Bureau of Pollution Control in August 1987 found that Wesson's two municipal wells, located approximately 1,000 feet southeast of Potter, contained significant concentrations of TCE. The wells were closed and the City installed new wells in June 1989. These new wells, however, are less than 1 mile southeast of the closed contaminated municipal wells. An estimated 1,500 people obtain drinking water from municipal wells within 4 miles of the site.

In November 1987, Potter installed a synthetic liner over contaminated soil in one of the plant's drainage ditches. Soil from the most heavily contaminated areas of the adjacent property was placed on a roll-off container and covered with a tarp.

In 1988 and 1989, further studies by Potter were conducted to characterize the extent of PCB contamination in surface soils and to determine the extent of the TCE plume in ground water.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



HORSESHOE ROAD Sayreville, New Jersey

The Horseshoe Road site covers approximately 9 acres on Horseshoe Road near the Raritan River in northern Sayreville, Middlesex County, New Jersey. The area around the site is densely populated and includes large residential, business, commercial, and industrial areas. Approximately 47 houses are located to the southeast within 0.5 mile of the site.

The site consists of four areas that are considered one NPL site because: (1) they are part of the same operation, (2) in general, they have the same potentially responsible parties, (3) contamination is threatening the same ground water, surface water, and air, and (4) they are no more than about 1,000 feet apart.

The history of the site is complex, involving numerous real estate transactions. At least 18 entities were involved in the four areas during 1965-81, according to the New Jersey Department of Environmental Protection and Energy (NJDEPE). The four areas are described below.

Horseshoe Road Drum Dump (Marsh Area Drums), where approximately 70 drums, many corroded and some labeled cyanide, were discovered during a fire in 1981. Using CERCLA emergency funds, EPA relocated the drums onto the Atlantic Development Corp. area of the site. The dump is in a wetland.

Atlantic Development Corp. Area, where several companies manufactured, processed, and blended various chemicals. During 1975-82, NJDEPE took numerous legal actions against the companies. In mid-1980, NJDEPE removed over 1,000 drums from the area after the companies failed to do so. NJDEPE analyses of soil samples in 1985 detected volatile organic compounds (including toluene), semivolatile organic compounds, and heavy metals. EPA soil analyses in 1989 detected similar hazardous substances, plus pesticides and PCBs. In an April 1991 onsite inspection, EPA found 400 5-gallon containers holding solids and semisolids of various colors. Most containers were open, and many were crushed as a result of a fire in 1983.

Sayreville Pesticide Dump, an abandoned property now in the custody of the State. In the April 1991 inspection, EPA found at least 160 corroded or crushed drums, many containing a white powder. NJDEPE's 1985 analyses detected benzene, ethylbenzene, and toluene in soil, and EPA's 1989 analyses detected 1,2,4-trichlorobenzene, copper, and mercury. Surface water and sediments in a small stream originating near the Sayreville Pesticide Dump contain heavy metals (copper, lead, and mercury); phenol; bis (2-chloroethyl) ether; methoxychlor; lindane; chloroform; and 1,2-dichloroethane, according to EPA's 1989 analyses. Hard clams are harvested from Raritan Bay and Sandy Hook Bay, coastal tidal waters within 15 miles downstream of the site. Wetlands on and off the site are also threatened. An estimated 14,000 people obtain drinking water from public wells within 4 miles of the site.

Atlantic Resources Corp., where precious metals, and perhaps solvents, were recycled during 1972-85 by Atlantic Resources Corp. and International Resources Corp. Twice during the winter of 1986-87, mercury spilled onto the ground. In March 1987, EPA used CERCLA emergency funds to remove 70 pounds of mercury and contaminated soil to a hazardous waste facility regulated under Subtitle C of the Resource Conservation and Recovery Act. EPA also removed thirty 5-gallon containers of sodium cyanide, which was used in the metal recycling process.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



ONONDAGA LAKE Syracuse, New York

The Onondaga Lake site is located in the City of Syracuse and in the Towns of Salina, Geddes, and Camillus, Onondaga County, New York. Onondaga Lake is approximately 4.5 miles long and averages 1 mile in width. Seven major tributaries flow into the lake; water exits the lake via a barge canal at its northwest end and flows into the Seneca River. The land immediately adjacent to the lake consists primarily of industrial properties and county parks.

A ban was placed on public fishing from the lake in 1970 due to high concentrations of mercury in several species of fish. The lake was re-opened to fishing in 1986 on a catch and release basis only. Population and industrial growth in the areas surrounding Onondaga Lake has resulted in extensive biological, chemical, and physical degradation of its waters. In addition to mercury contamination in the lake, analyses of sediment samples detected barium, cadmium, chromium, cobalt, lead, benzene, chlorobenzene, total xylenes, various polycyclic aromatic hydrocarbons, pesticides, and PCBs.

Historical information indicates that the lake received surface water discharges from various industrial processes and municipal waste water treatment plants. Initially, EPA has evaluated only operations of Allied Signal, Inc. and/or its predecessors, and Linden Chemicals and Plastics, Inc. (LCP) now owned by the Hanlin Group. EPA is attempting to identify additional potentially responsible parties.

The Allied facilities manufactured numerous organic and inorganic chemicals. Allied's Willis Avenue plant and LCP's Bridge Street plant (located west of the Main Plant complex), used a mercury cell process to produce chlorine, sodium hydroxide, and potassium hydroxide. Each plant discharged aqueous waste streams containing mercury as part of normal operations. Other waste sources include Allied's Solvay Waste Beds containing by-products generated from soda ash production and Semet Residue Ponds containing wastes generated from acid washing of light oil.

Several consent orders have been signed in recent years between Allied and the New York State Department of Environmental Conservation (NYSDEC) regarding the Solvay Waste Beds, the Semet Residue Ponds and ground water contamination at the location of the Willis Avenue Plant. In early 1992, Allied and the NYSDEC signed a consent decree to perform a remedial investigation/feasibility study to determine the type and extent of contamination at Onondaga Lake and identify alternatives for remedial action.

NYSDEC has also filed an action against the Hanlin Group under Subtitle C of the Resource Conservation and Recovery Act (RCRA). The Hanlin Group commenced bankruptcy proceedings on July 10, 1991.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



PFOHL BROTHERS LANDFILL Cheektowaga, New York

Pfohl Brothers Landfill, a privately owned and operated landfill, deposited municipal and industrial wastes between 1932 and 1971 at a 166.5-acre property in Cheektowaga, Erie County, New York. The northern section of the landfill has been graded and is now occupied by a trucking firm. The area is residential and commercial. Buffalo International Airport is approximately 0.5 mile west of the site.

Chemical wastes in liquid, solid, and sludge form were either buried at the site in drums or placed into cells excavated in the ground. The wastes deposited included cyanides and plating sludge, waste paint and paint sludge, lithographic inks, pigments, organic solvents, liquid and solid PCB-contaminated wastes, sludge from distillation processes, petroleum wastes, and 100 to 125 tons of phenol tar containing chlorinated benzenes and dioxins.

Since 1980, the Erie County Health Department, EPA, the New York State Department of Environmental Conservation (NYSDEC), and the owner have investigated the site. A remedial investigation was conducted in 1988-89 by NYSDEC.

The investigations indicated that surface water both on and off the site is contaminated by organic chemicals, including benzene, phenol, chlorobenzene, and dichlorobenzene. Nearby surface water consists of Ellicott Creek, an adjacent ditch that leads into the creek, and Aero Lake, which lies just north of the ditch. The lake and creek are used for recreational fishing. A wetland formerly existed in what is now the central section of the property. Other wetlands border the creek and ditch.

Onsite and offsite soil is contaminated with PCBs, barium, manganese, and mercury, according to the remedial investigation. Most of the site is fenced, but drainage ditches contaminated with leachate from the landfill lie outside the fencing and are accessible to the public. Ten homes are within 200 feet of an area of contaminated soil.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



DIAMOND SHAMROCK CORP. (PAINESVILLE WORKS)
Painesville, Ohio

Diamond Shamrock Corp.'s Painesville Works covers about 500 acres between Lake Erie and the Grand River in Painesville, Lake County, Ohio. The site is bordered on the east by a large tire manufacturing company and on the west by an industrial area in the city of Fairport Harbor.

The Diamond Shamrock Works began operations in 1912, producing mainly caustic soda. The plant also produced chromate compounds, chlorine and chlorinated paraffins, and coke. Diamond Shamrock also accepted and disposed of used spent pickle liquor from nearby steel industries. In October 1931, the plant began production of chromates, including sodium dichromate, potassium dichromate, and chromic acid. The plant closed in 1972. In 1977, the State of Ohio approved a reclamation plan submitted by Diamond Shamrock. In accordance with the plan, Diamond Shamrock would cover one of the waste lakes with a clay cover. In 1986, Maxus Energy Corp. bought out Diamond Shamrock Chemical Co. Shortly after, the property was divided into parcels, some of which were sold to Standard Machine Equipment. During the demolition of buildings on the production site, PCBs were discovered in the transformer oils. Oil containing PCBs was recovered, all onsite buildings were demolished, contaminated soil was covered with clay, and the site graded to drain toward Lake Erie.

Eight sources are associated with the Diamond Shamrock Works; 0.75 million tons of chromate waste materials, three waste lakes, a waste water retention basin, a hazardous waste landfill, chromate effluent treatment lagoons, and contaminated soils in the main production area.

This site poses a threat to the drinking water intakes along Lake Erie, and to the fisheries, wetlands, and sensitive environments in the Grand River and Lake Erie. Several substances were found in the surface water and sediment sampling conducted in 1981 by EPA, including: hexavalent chromium, mercury, cyanide, ethylbenzene, xylene, and naphthalene. Headlands Beach State Park, located approximately 0.25 mile west of the Grand River's entry into Lake Erie, is a significant recreation area. The Grand River has several species of fin fish and is used for sports fishing. Lake Erie is used for sport and commercial fishing. The Grand River and the adjacent stream-reach to this site are partially lined with wetlands. The wetlands provide habitat for the River Otter, a State-endangered-species. The area is also a prime habitat for the Indiana Bat. The Grand River in the vicinity of the site is designated by the State of Ohio as an area for production and maintenance of aquatic life under section 305 of the Clean Water Act.

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DOVER CHEMICAL CORP.
Dover, Ohio

Dover Chemical Corp. occupies 60 acres on the corner of 15th and Davis Streets in the City of Dover, Tuscarawas County, Ohio. The site is on the east bank of Sugar Creek, approximately 1 mile above where it meets the Tuscarawas River. The area is primarily residential. The first facilities were constructed at the site before World War II. Dover Chemical was incorporated in 1951. In 1974, Ansul Industries acquired the Dover site, and in 1975 the site was purchased by ICC Industries. Dover Chemical is a subsidiary of ICC Industries.

Since 1949, the company has produced chlorinated organic compounds, including dichlorobenzene, trichlorobenzene, tetrachlorobisphenol A (TCBA), and dihydroxybenzophenone by-products (later replaced with chlorinated paraffin by-products). These by-products are used in manufacturing pressure lubricants, plasticizers, and flame retardants for vinyl products, as well as phosphites (used for temperature, light, and color stabilization of plastics). Dover Chemical also refined chemicals thought to have been contaminated with polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) in the production area, which covers 9 acres.

In the early 1960s, Dover Chemical placed 4,000 gallons of mixed chlorinated benzene by-products in a low swampy area in the southwest corner of the property and buried 10 drums of chlorinated paraffin by-products in the east central portion of the property. In 1981, Dover removed 975 tons of waste material and surrounding contaminated soil to a landfill permitted under Subtitle C of the Resource Conservation and Recovery Act (RCRA). Following the 1981 removal action, Dover conducted an environmental investigation, leading to a draft feasibility study that was submitted to EPA and the Ohio Environmental Protection Agency (OEPA) in April 1986. Both EPA and OEPA rejected the report and requested that additional data be obtained to complete the remedial investigation/feasibility study (RI/FS). In September 1988, Dover Chemical and EPA entered into an Administrative Order on Consent under CERCLA section 104 to complete the RI/FS. During the RI, Dover Chemical detected PCDDs and PCDFs in soils both on and off the site. Under an interim action Administrative Order on Consent, issued by EPA in June 1991 under CERCLA Section 106, the company removed these contaminated soils, transported them to a hazardous waste facility regulated under RCRA Subtitle C, and stabilized the areas. The action was completed in October 1992.

In June 1991, EPA detected organics, including tetrachloroethene, chlorobenzene, dichlorobenzenes, and trichlorobenzenes, in onsite monitoring wells. Approximately 27,000 people rely on wells within 4 miles of the site for drinking water; included are 11,000 people serviced by the Dover municipal wells, one of which is located 1,100 feet from the site, and 16,000 people serviced by the New Philadelphia municipal well field 3.9 miles from the site.

Late in 1992, Dover Chemical started pumping the contaminated ground water to the surface and treating it to remove the contaminants. EPA expects to receive Dover Chemical's draft RI/FS report early in 1993.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



**NATIONAL ZINC CORP.
Bartlesville, Oklahoma**

The National Zinc Corp. (NZC) site is located on a 135-acre property at 11th and Virginia Streets in Bartlesville, Washington County, in northeastern Oklahoma. The Bartlesville area is primarily residential including schools, day care centers, churches, playground parks, recreational areas, and business properties.

NZC operated a zinc smelter on this site from 1907 to 1976, when it was acquired by the Zinc Corporation of America. NZC was also known as National Zinc Co., Horsehead, Inc., and St. Joe Mineral.

The NZC smelter had no air emission controls, allowing emissions to be deposited downwind in various areas in Bartlesville. According to 1992 EPA reports, lead and cadmium levels in the top 2 feet of soil are greater than three times natural background levels. Although the extent of the area of contamination has not been completely determined, it includes contaminated soils at two schools and three day care centers. An estimated 1,700 students attend the school and day care centers, and 170 people work at the facilities.

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EAST MULTNOMAH COUNTY GROUND WATER CONTAMINATION Multnomah County, Oregon

The East Multnomah County Ground Water Contamination site covers 3 square miles in Multnomah County east of Portland, Oregon. Current studies indicate that the site involves plumes of ground water contaminated with chlorinated organic solvents. The plumes are from individual sources and are mixing together.

EPA learned that trichloroethene (TCE) and two of its degradation products, 1,1-dichloroethene and 1,1-dichloroethane, were contaminating ground water in 1986 when the Boeing Co. Portland Plant was closing a surface impoundment under Subtitle C of the Resource Conservation and Recovery Act (RCRA). A subsequent investigation by Boeing found ground water contamination upgradient of the plant. During 1987-1991, EPA inventoried local businesses (many of which use TCE as a solvent) and investigated the area extensively, including sampling wells and conducting an area-wide soil gas survey. The results documented three sources of ground water plumes, including the Boeing plant, identified five potential sources requiring further investigation, and suggested still more sources may be identified. The other two documented sources are Cascade Corp. and Swift Adhesives (a division of Reichhold Chemicals, Inc.), both upgradient of the Boeing plant. Chlorinated organic solvents have been detected in soils and ground water at both plants, as well as in downgradient ground water. Because the Boeing plant is regulated under RCRA, it is not part of the NPL site, although its cleanup will be coordinated with any CERCLA action.

Soil gas studies indicate that potential sources may exist at Norwest Paper, Firestone, Opticraft, Northwest Retreader, and an area near Parker & Grantz Automotive. The Oregon Department of Environmental Quality has started preliminary investigations at the Norwest Paper and Opticraft facilities.

In addition to the EPA investigations, the companies, either independently or under State enforcement orders, have also conducted investigations. Recent studies by Swift Adhesives found that a well upgradient of its plant is showing increased levels of organic solvents, suggesting a previously unidentified source.

An estimated 280,000 people (including 267,500 in Portland and vicinity) use the affected ground water for standby wells.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



ICG ISELIN RAILROAD YARD Jackson, Tennessee

The ICG Iselin Railroad Yard (ICG Iselin) is located in Jackson, Madison County, Tennessee. The 80-acre site is situated at the intersection of Eastern Street and Magnolia Street in a predominately suburban area.

From 1906 to 1940, the property was owned and operated by Mobile & Ohio Railroad Co. (M&O). According to a 1926 tax map for the City, the facility at one time included a round house, a steam locomotive fueling station, a coal-fired power plant, and the locomotive maintenance building. In 1940, M&O was sold to Gulf Mobile & Ohio Railroad Co., which reorganized in 1972 as the Illinois Central Gulf Railroad Co. (ICG). From 1972 to 1986 ICG used the site as a locomotive maintenance facility. The Williams Steel Co. purchased partial acreage in 1986, and used it as a steel fabrication facility until 1989. In that year, the property was transferred to its present owner Iselin Properties, Inc. through Campbell & Associates. The remaining acreage is owned by Norfolk Southern Railway Co. The ICG Iselin site includes a main warehouse; numerous railroad tracks; storage tanks; a pollution abatement system that includes a lye vat, a neutralization tank, several drainage ditches, a concrete tank, and a surface impoundment; a battery waste disposal pile; and a fueling platform under an open-air shed.

Disposal practices at the site prior to 1972 are unknown. In 1973, ICG Iselin was issued a temporary NPDES permit for discharge into river mile 0.5 of Jones Creek, pending the construction and approval of a pollution abatement facility. In 1975 and in 1980, the facility reported that it exceeded its NPDES permit parameters for chromium.

A 1990 investigation by the Tennessee Department of Health and Environment identified organic and inorganic constituents in surface soils. In 1991, the EPA conducted further sampling. Both investigations showed elevated levels of chromium, copper, and lead in surface soils. The 1991 investigation also identified vinyl chloride, chloroethane, tetrachloroethene, 1,1-dichloroethane, benzene, ethylbenzene, and xylenes in onsite sediments.

The Jackson Utility Division supplies drinking water to approximately 31,000 people from 10 wells within 4 miles of the facility.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



RSR CORP.
Dallas, Texas

The RSR Corp. site is on the west side of Dallas in Dallas County, Texas. The site consists of areas of contaminated soil located south of the Trinity River, between Norwich and Hampton Roads, and north of the Missouri Pacific Railroad tracks. RSR Corp.'s secondary lead smelter, located at 1111 West Mockingbird Street at the corner of Westmoreland Road and Singleton Boulevard, emitted lead into the atmosphere. Before RSR acquired the facility in 1971, the smelter had operated continuously since 1936 as Southern Lead, Southern Smelter, or Murph Metals. The smelter processed lead slag and scrap from battery manufacturing. Operations stopped in 1984.

Because the wind blows predominately from the south, the lead emitted by the smelter was carried north and deposited in a mixed residential-commercial area that includes 170 homes, parks, schools, churches, playgrounds, day care centers, recreational facilities, and businesses. About 70 people work at a school on the site. EPA conducted tests in 1992, and found battery casing chips contaminating areas approximately 1.5 miles west and 3 miles southwest of the smelter. In addition, areas near the smelter are contaminated from battery casing chips and slag that have been used as fill for residences, driveways, and gardens.

In 1968, the City of Dallas began a series of legal actions against RSR Corp., including fines, lawsuits, and compliance agreements for violations of air emission standards.

In 1982, monitors placed by the City and the Texas Air Control Board found that air lead levels near the smelter exceeded EPA's National Ambient Air Quality Standard. In 1983, the State, City, and EPA ordered RSR to conduct soil cleanup and control stack and fugitive emissions from the smelter. EPA ordered these actions under an Administrative Order on Consent issued under CERCLA Section 106. In the same year, the Dallas Housing Authority processed a Comprehensive Improvement and Assistance Plan application for its West Dallas housing projects located to the northeast of the corner of Westmoreland and Singleton. The City ordered RSR to stop lead smelting operations in 1984. In 1986, EPA confirmed completion of all soil cleanup and other activities under its 1983 order in the neighborhoods within 0.5 mile of the smelter.

In July 1991, the Texas Water Commission (TWC) notified EPA that hazardous wastes had been found in the West Dallas area as a result of a citizen's complaint. EPA sampling confirmed elevated levels of lead and began working with residents to remove the contaminated soils and replace them with clean soil.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



LANGLEY AIR FORCE BASE/NASA LANGLEY RESEARCH CENTER Hampton, Virginia

The Langley Air Force Base (LAFB)/NASA Langley Research Center (NASA Langley) site consists of two adjacent Federal facilities located in Hampton, Virginia, on a peninsula separating the Northwest and Southwest branches of the Back River. The Back River supports commercial and recreational crab, oyster, quahog, and fin fishing. The Back River's two branches form a tidal estuary that empties into the Chesapeake Bay.

LAFB is a 3,152-acre site with more than 10,000 employees. NASA Langley covers 772 acres and employs an additional 5,000 government and contract workers. Residential, rural, and intertidal wetlands surround the facilities. Wetlands in the Plum Tree Island National Wildlife Refuge are located northeast of the site.

LAFB has been an airfield and aeronautical research center since 1917 and is the home base for the First Tactical Fighter Wing. NASA Langley is a research facility that conducts 270 operations in 191 buildings and operates 40 wind tunnels. Wastes generated at LAFB and NASA Langley include waste oils, solvents, paint wastes, pesticide containers and rinse waters, photographic wastes, scrap materials, used batteries, and printed circuit board plating wastes. PCBs and polychlorinated terphenyls (PCTs) were used in hydraulic systems, electrical equipment, compressors, and casting operations.

Previous studies conducted at the two facilities identified over 30 possible sources of contamination. Initially, four sources were evaluated in detail.

Landfills 10, 11, and 12, located in the northern part of the site were used from approximately 1950 until 1980. Wastes known or suspected to have been disposed of at this source included waste solvents and paints, used batteries, scrap metal, pesticides, municipal wastes, general chemicals, sanitary refuse, photofinishing wastes, and hospital and lab wastes. Analytical data revealed lead, cadmium, silver, and phenols in ground water. Available information indicates that this area had been predominantly wetlands.

Sediment and biota in the Back River and Tabbs Creek (a tributary of the northwest branch of the Back River) are contaminated extensively with PCBs and PCTs. Tabbs Creek, in which highest levels of contamination were found, is inaccessible to the public for security reasons and has been posted as a "no fishing" area because of coliform contamination.

Storm sewers, sumps, and three drainage systems also are being evaluated (Sources Nos. 11, 12, and 30). Releases has been observed below the storm sewer outfalls. The storm sewers are subject to storm and tidal influences. Electrical equipment containing PCBs and lubricating oils, hydraulic fluids, mercury, and pesticides have been released on the site.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



MARINE CORPS COMBAT DEVELOPMENT COMMAND Quantico, Virginia

The Marine Corps Combat Development Command (MCCDC) is located in Quantico, Virginia, 35 miles south of Washington, D.C. along the Potomac River. The MCCDC covers approximately 56,000 acres in southern Prince William County, northern Stafford County, and eastern Fauquier County. MCCDC is bordered by Prince William Forest Park to the north and the Potomac River to the east. Residential areas are located on the western and southern portions of the base.

Operations at MCCDC began in 1917 when 5,300 acres of land adjacent to the Potomac River near Quantico was leased by the Department of Defense in order to establish a new marine training camp. In April 1943, 50,985 acres of land west of Route 1 was obtained to accommodate increased training activities. Currently the emphasis at the Command is to prepare Marine Corps officers for general combat by providing varied background in tactical operations and performing research and development of Marine Corps equipment.

Studies conducted by the Navy in 1988 identified five areas of potential contamination. The three described below were initially evaluated in detail.

The Old Landfill was the primary base landfill from the 1920s to 1971. It covers 8 acres along the west bank of the Potomac River. The northern portion of the landfill, known as the Defense Reutilization Marketing Office storage yard, was used for the draining and storage of electrical transformers. Extensive PCB contamination has been identified in soils, ground water, and Potomac River sediments.

The Recently Closed Landfill is a 28-acre landfill that operated from 1971 to 1983. Wastes disposed of from base activities included waste paints and solvents. Landfill leachate was observed leaking from the southern portion of the landfill. Shallow ground water and leachate samples were found to contain various organic compounds.

The Old Batch Plant is an area 30 feet by 50 feet that was used for the storage of electrical transformers in the 1970s. The majority of the area is paved, but covered with varying amounts of soil. Soils are contaminated with PCBs. Surface water runoff drains into the Potomac River.

Another source that has been identified is the Pesticide Burial Area, where pesticides were dumped into a pit 16 feet in diameter by 8 feet deep. Pesticide contamination was detected, but not quantified, and arsenic contamination was detected in one soil boring. In addition, the Arsenic Burial Area was used for a one-time disposal of 27 drums containing the product "arsenic of lead", apparently used for weed control.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



PACIFIC SOUND RESOURCES Seattle, Washington

The West Seattle wood treating plant of Pacific Sound Resources (PSR) is located at 2801 Southwest Florida Street in Seattle, King County, Washington. The 20-acre property is in an industrial area on the shore of Elliott Bay and Puget Sound, near the Duwamish River. Wood treating operations at the plant date to 1906. PSR has owned and operated the facility since 1964. Another turn-of-the-century wood treating facility owned and operated by PSR (formerly the Wyckoff Co.) since 1964 was placed on the NPL in 1987 as part of the Wyckoff Co.-Eagle Harbor site.

Operations at the two facilities have been similar. The primary wood preservatives used were creosote, which consists primarily of polyaromatic hydrocarbons (PAHs) and pentachlorophenol (PCP). Each was mixed with fuel oil. In addition, substantial quantities of chemonite, which contains copper, arsenic, and zinc, were also used.

Wood treatment operations at the West Seattle plant have contaminated soil, ground water, and Puget Sound sediments with creosote, PCP, fuel oil, and chemonite metals. A significant source of contamination was a "transfer table," where containers were loaded and unloaded. The transfer table was located in a shallow unlined earthen pit known as the "transfer table pit." Numerous investigations of the pit, including one by EPA in 1989, have documented contamination with arsenic, chromium, copper, zinc, and PAHs. In August/September 1990, PSR excavated approximately 450 cubic yards of soils and sludge from the pit, placed them in a containment box on the northeast end of the site, and covered the box with a 3-inch layer of concrete over wire mesh.

Another source of hazardous substances at the site is an area adjacent to Elliott Bay where three aboveground tanks were formerly used to store creosote. A major leak occurred at one of the tanks in 1970. In addition, numerous spills occurred over the years from pipelines leading to the tanks.

Heavy metals and PAHs were found in Elliott Bay by the Washington Department of Ecology and EPA in 1988. Hazardous substances from the site can flow overland from the site to Elliott Bay through storm drains, direct surface runoff, flooding, and accidental spills or drips. The bay is a fishery, a critical migratory corridor for anadromous fish, and a subarea identified in the Comprehensive Conservation and Management Plan for the Puget Sound National Estuary.

In July/August 1991, EPA found heavy metals and PAHs in onsite soil and air downwind of the site. An estimated 150 people live within 0.25 mile of the site, and 175,000 within 4 miles.

Since 1984, EPA has issued several administrative orders against Wyckoff under CERCLA, the Resource Conservation and Recovery Act (RCRA), and the Clean Water Act (CWA) requiring investigation and cleanup at the site.

In 1985, Wyckoff and officials no longer associated with PSR, pleaded guilty to violations of RCRA for storing hazardous waste at the West Seattle plant without a RCRA permit and violations of CWA for discharging wood preserving residues into the West Waterway of the Duwamish River.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)



PUGET SOUND NAVAL SHIPYARD COMPLEX Bremerton, Washington

The Puget Sound Naval Shipyard Complex is located in Bremerton, Washington, along Sinclair Inlet on Puget Sound approximately 15 miles west of Seattle. The Navy has owned and operated facilities at this location since 1891.

The complex, which consists of the Naval Shipyard and the Naval Supply Center, employs over 12,000 people. The site covers approximately 350 acres of land and an additional 340 acres of tidelands along 11,000 feet of shoreline. The complex contains over 300 buildings and structures, 6 deep water piers, 6 dry docks, and numerous moorings. The major industrial activities at the complex include construction, repair, overhaul, maintenance, mooring, berthing, and dry docking of naval ships and staging and supply of materials. The activities generate a large amount of hazardous waste.

EPA has identified 58 known or potential sources of contamination at the complex. In 1990 and 1991, the Navy found elevated levels of heavy metals, semivolatile organic compounds, PCBs, and pesticides in surface soils, subsurface soils, and ground water in a number of areas throughout the complex, as well as in sediments of Sinclair Inlet adjacent to the shipyard. Based on these results, the Washington Department of Ecology (WDOE) issued separate administrative orders to the Naval Shipyard and the Naval Supply Center requiring the Navy to conduct further studies of the contamination.

Sinclair Inlet provides a habitat for a variety of marine fishes, the most important being the salmonid species. Commercial and recreational fishing, boating, and contact recreation occur in the inlet.

EPA, the Navy, and WDOE will negotiate a Federal Facilities Agreement under CERCLA Section 120 requiring the Navy to investigate and remediate the site.

(The description of the site (release) is based on information available at the time the site was scored. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.)